APPENDIX: Sequence Listing

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/520,497
Source: PCT
Date Processed by STIC: 03/20/2006

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PCT

RAW SEQUENCE LISTING DATE: 03/20/2006
PATENT APPLICATION: **US/10/520,497** TIME: 12:25:20

Input Set : **A:\023070-127310US.ST25.txt**
Output Set: **N:\CRF4\03202006\J520497.raw**

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  3 <110> APPLICANT: The Regents of the University of California
  4       Shi, Huazhong
  5       Blumwald, Eduardo
  7 <120> TITLE OF INVENTION: IMPROVED TRANSPORTERS AND THEIR USES
  9 <130> FILE REFERENCE: 023070-127310US
 11 <140> CURRENT APPLICATION NUMBER: US 10/520,497
C--> 12 <141> CURRENT FILING DATE: 2005-01-07
 14 <150> PRIOR APPLICATION NUMBER: WO PCT/US2003/021549
 15 <151> PRIOR FILING DATE: 2003-07-09
 17 <150> PRIOR APPLICATION NUMBER: US 60/395,662
 18 <151> PRIOR FILING DATE: 2002-07-12
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 25 <211> LENGTH: 1614
 26 <212> TYPE: DNA
 27 <213> ORGANISM: Arabidopsis thaliana
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 36 gttaccattt tgttgattag taaaggaaaa agctcgcatc ttctcgtctt tagtgaagat    240
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 40 aagcagtttt tccgcaattt cgtgactatt atgctttttg gtgctgttgg gactattatt    360
 42 tcttgcacaa tcatatctct aggtgtaaca cagttcttta agaagttgga cattggaacc    420
 44 tttgacttgg gtgattatct tgctattggt gccatatttg ctgcaacaga ttcagtatgt    480
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 54 tactttggaa ggcactcaac tgaccgagag gttgccctta tgatgcttat ggcgtatctt    780
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 60 catacctttg caactttgtc atttcttgcg gagacattta ttttcttgta tgttggaatg    960
 62 gatgccttgg acattgacaa gtggagatcc gtgagtgaca caccgggaac atcgatcgca   1020
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 72 ataactgtct gtctttttag cacagtggtg tttggtatgc tgaccaaacc actcataagc   1320
 74 tacctattac cgcaccagaa cgccaccacg agcatgttat ctgatgacaa caccccaaaa   1380
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PATENT APPLICATION: US/10/520,497 TIME: 12:25:20

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88 <213> ORGANISM: Arabidopsis thaliana
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101 35 40 45
104 Ser Ile Thr Ala Leu Leu Ile Gly Leu Gly Thr Gly Val Thr Ile Leu
105 50 55 60
108 Leu Ile Ser Lys Gly Lys Ser Ser His Leu Leu Val Phe Ser Glu Asp
109 65 70 75 80
112 Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala Gly Phe
113 85 90 95
116 Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Val Thr Ile Met Leu
117 100 105 110
120 Phe Gly Ala Val Gly Thr Ile Ile Ser Cys Thr Ile Ile Ser Leu Gly
121 115 120 125
124 Val Thr Gln Phe Phe Lys Lys Leu Asp Ile Gly Thr Phe Asp Leu Gly
125 130 135 140
128 Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr Asp Ser Val Cys
129 145 150 155 160
132 Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu Leu Tyr Ser Leu
133 165 170 175
136 Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val Val Val Phe
137 180 185 190
140 Asn Ala Ile Gln Ser Phe Asp Leu Thr His Leu Asn His Glu Ala Ala
141 195 200 205
144 Phe His Leu Leu Gly Asn Phe Leu Tyr Leu Phe Leu Leu Ser Thr Leu
145 210 215 220
148 Leu Gly Ala Ala Thr Gly Leu Ile Ser Ala Tyr Val Ile Lys Lys Leu
149 225 230 235 240
152 Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu Met Met Leu
153 245 250 255
156 Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe Asp Leu Ser Gly
157 260 265 270
160 Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His Tyr Thr Trp
161 275 280 285
164 His Asn Val Thr Glu Ser Ser Arg Ile Thr Thr Lys His Thr Phe Ala
165 290 295 300
168 Thr Leu Ser Phe Leu Ala Glu Thr Phe Ile Phe Leu Tyr Val Gly Met
169 305 310 315 320
172 Asp Ala Leu Asp Ile Asp Lys Trp Arg Ser Val Ser Asp Thr Pro Gly
173 325 330 335

RAW SEQUENCE LISTING DATE: 03/20/2006
PATENT APPLICATION: US/10/520,497 TIME: 12:25:20

Input Set : A:\02307O-127310US.ST25.txt
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184 Lys Asn Gln Ser Glu Lys Ile Asn Phe Asn Met Gln Val Val Ile Trp
185     370                 375                 380
188 Trp Ser Gly Leu Met Arg Gly Ala Val Ser Met Ala Leu Ala Tyr Asn
189 385                 390                 395                 400
192 Lys Phe Thr Arg Ala Gly His Thr Asp Val Arg Gly Asn Ala Ile Met
193                 405                 410                 415
196 Ile Thr Ser Thr Ile Thr Val Cys Leu Phe Ser Thr Val Val Phe Gly
197             420                 425                 430
200 Met Leu Thr Lys Pro Leu Ile Ser Tyr Leu Leu Pro His Gln Asn Ala
201         435                 440                 445
204 Thr Thr Ser Met Leu Ser Asp Asp Asn Thr Pro Lys Ser Ile His Ile
205     450                 455                 460
208 Pro Leu Leu Asp Gln Asp Ser Phe Ile Glu Pro Ser Gly Asn His Asn
209 465                 470                 475                 480
212 Val Pro Arg Pro Asp Ser Ile Arg Gly Phe Leu Thr Arg Pro Thr Arg
213                 485                 490                 495
216 Thr Val His Tyr Tyr Trp Arg Gln Phe Asp Asp Ser Phe Met Arg Pro
217             500                 505                 510
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241 gaagagaata gatggatgaa cgaatccatc accgccttgt tgattgggct aggcactggt    180
243 gttaccattt tgttgattag taaaggaaaa agctcgcatc ttctcgtctt tagtgaagat    240
245 cttttcttca tatatctttt gccacccatt atattcaatg cagggtttca agtaaaaaag    300
247 aagcagtttt tccgcaattt cgtgactatt atgctttttg gtgctgttgg gactattatt    360
249 tcttgcacaa tcatatctct aggtgtaaca cagttcttta agaagttgga cattggaacc    420
251 tttgacttgg gtgattatct tgctattggt gccatatttg ctgcaacaga ttcagtatgt    480
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255 ggtgttgtga atgatgcaac gtcagttgtg gtcttcaacg cgattcagag ctttgatctc    600
257 actcacctaa accacgaagc tgcttttcat cttcttggaa acttcttgta tttgtttctc    660
259 ctaagtacct tgcttggtgc tgcaaccggt ctgataagtg cgtatgttat caagaagcta    720
261 tactttggaa ggcactcaac tgaccgagag gttgccctta tgatgcttat ggcgtatctt    780
263 tcttatatgc ttgctgagct tttcgacttg agcggtatcc tcactgtgtt tttctgtggt    840
265 attgtgatgt cccattacac atggcacaat gtaacggaga gctcaagaat aacaacaaag    900
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275 gttgtgattt ggtggtctgg tctcatgaga ggtgctgtat ctatggctct tgcatacaac 1200
277 aagtttacaa gggccgggca cacagatgta cgcgggaatg caatcatgat cacgagtacg 1260
279 ataactgtct gtctttttag cacagtggtg tttggtatgc tgaccaaacc actcataagc 1320
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283 tccatacata tccctttgtt ggaccaagac tcgttcattg agccttcagg gaaccacaat 1440
285 gtgcctcggc ctgacagtat acgtggcttc ttgacacggc ccactcgaac cgtgcattac 1500
287 tactggagac aatttgatga ctgcttcatg cgacccgtct ttggaggtcg tggctttgta 1560
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311 35 40 45
314 Ser Ile Thr Ala Leu Leu Ile Gly Leu Gly Thr Gly Val Thr Ile Leu
315 50 55 60
318 Leu Ile Ser Lys Gly Lys Ser Ser His Leu Leu Val Phe Ser Glu Asp
319 65 70 75 80
322 Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala Gly Phe
323 85 90 95
326 Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Val Thr Ile Met Leu
327 100 105 110
330 Phe Gly Ala Val Gly Thr Ile Ile Ser Cys Thr Ile Ile Ser Leu Gly
331 115 120 125
334 Val Thr Gln Phe Phe Lys Lys Leu Asp Ile Gly Thr Phe Asp Leu Gly
335 130 135 140
338 Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr Asp Ser Val Cys
339 145 150 155 160
342 Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu Leu Tyr Ser Leu
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346 Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val Val Val Phe
347 180 185 190
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351 195 200 205
354 Phe His Leu Leu Gly Asn Phe Leu Tyr Leu Phe Leu Leu Ser Thr Leu
355 210 215 220
358 Leu Gly Ala Ala Thr Gly Leu Ile Ser Ala Tyr Val Ile Lys Lys Leu
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362 Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu Met Met Leu

RAW SEQUENCE LISTING DATE: 03/20/2006
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371         275                 280                 285
374 His Asn Val Thr Glu Ser Ser Arg Ile Thr Thr Lys His Thr Phe Ala
375     290                 295                 300
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379 305                 310                 315                 320
382 Asp Ala Leu Asp Ile Asp Lys Trp Arg Ser Val Ser Asp Thr Pro Gly
383                 325                 330                 335
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398 Trp Ser Gly Leu Met Arg Gly Ala Val Ser Met Ala Leu Ala Tyr Asn
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